

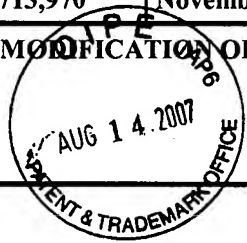
**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(d))

Docket No. *17106*  
**17106**

In Re Application Of: **Roland Contreras, et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/713,970	November 14, 2003	K. H. Gebreyesus	23389	1656	5158

Title: **MODIFICATION OF PROTEIN GLYCOSYLATION IN METHYLOTROPHIC YEAST**



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*Xiaochun Zhu*  
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Signature

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**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicants:** Roland Contreras, et al.

**Examiner:** Kagnew H. Gebreyesus

**Serial No.:** 10/713,970

**Art Unit:** 1656

**Filed:** November 14, 2003

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**For:** MODIFICATION OF PROTEIN  
GLYCOSYLATION IN  
METHYLOTROPHIC YEAST

**Dated:** August 10, 2007

**Confirmation No.:** 5158

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, it is requested that the following references, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

1. PCT International Publication No. WO 03/56914 A1, published July 17, 2003;

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**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)**

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Dated: August 10, 2007

  
Xiaochun Zhu

08/15/2007 WASFAW1 00000009 10713970  
01 FC:1806 180.00 DA

2. Routier F. H. et al., "The glycosylation pattern of a humanized IgG1 antibody (D1.3) expressed in CHO cells", *Glycoconjugate Journal* 14: 201-207 (1997);
3. Kornfeld R. et al., "Assembly Of Asparagine-Linked Oligosaccharides", *Ann. Rev. Biochem.* 54: 631-664 (1985);
4. Malissard M. et al., "Expression of Functional Soluble Forms of Human  $\beta$ -1,4-Galactosyltransferase 1,  $\alpha$ -2,6-Sialyltransferase, and  $\alpha$ -1,3-Fucosyltransferase VI in the Methylotrophic Yeast *Pichia pastoris*", *Biochemical and Biophysical Research Communications* 267: 169-173 (2000);
5. Bencurova M. et al., "Expression of eukaryotic glycosyltransferases in the yeast *Pichia pastoris*", *Biochimie* 85: 413-422 (2003);
6. Schwientek T. et al., "Golgi Localization and in Vivo Activity of a Mammalian Glycosyltransferase (Human  $\beta$ 1, 4-Galactosyltransferase) in Yeast", *The Journal of Biological Chemistry* 271(7): 3398-3405 (1996);
7. Vervecken W. et al., "In Vivo Synthesis of Mammalian-Like, Hybrid-Type N-Glycans in *Pichia pastoris*", *Applied and Environmental Microbiology* 70(5): 2639-2646 (2004);
8. Bobrowicz P. et al., "Engineering of an artificial glycosylation pathway blocked in core oligosaccharide assembly in the yeast *Pichia pastoris*: production of complex humanized glycoproteins with terminal galactose", *Glycobiology* 14(9): 757-766 (2004);
9. Czlapinski J. L. et al., "Synthetic glycobiology: exploits in the Golgi compartment", *Current Opinion in Chemical Biology* 10: 645-651 (2006);
10. PCT International Publication No. WO 04/074499 A2, published September 2, 2004; and
11. PCT International Publication No. WO 05/100584 A2, published October 27, 2005.

Reference numbers 1-11 were cited in a Supplementary European Search Report dated May 10, 2007 received from the European Patent Office. Applicants are submitting copies of the above-cited references, together with a copy of the Supplementary European Search Report. The relevance of Reference numbers 1-11 has been described in the Supplementary European Search Report.

Applicants submit that the other references cited in the Supplementary European Search Report, namely Maras et al., "In vitro conversion of the carbohydrate moiety of fungal glycoproteins to mammalian-type oligosaccharides", *Eur. J. Biochem.* 249: 701-707 (1997); WO 02/00879 A2, published January 3, 2002; Hamilton et al., "Production of Complex Human Glycoproteins in Yeast", *Science* 301: 1244-1246 (2003); Choi et al., "Use of combinatorial genetic libraries to humanize N-linked glycosylation in the yeast *Pichia pastoris*", *PNAS* 100(9): 5022-5027 (2003); WO 02/00856 A2, published January 3, 2002; and Chiba et al., "Production of Human Compatible High Mannose-type (Man<sub>5</sub>GlcNAc<sub>2</sub>) Sugar Chains in *Saccharomyces cerevisiae*", *The Journal of Biological Chemistry* 273(41): 26298-26304 (1998), were previously submitted with Applicants' Information Disclosure Statement dated April 6, 2004.

The undersigned hereby states that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

Inasmuch as this Information Disclosure Statement is being submitted in accordance with the schedule set out in 37 C.F.R. §§ 1.97(d) and (e), the Commission is hereby authorized to charge the fee in the amount of \$180.00 to Deposit Account No. 19-3886/RCT.

Respectfully submitted,

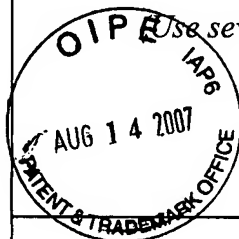


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PATENT AND TRADEMARK OFFICE**LIST OF PRIOR ART  
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Atty. Docket No. (Optional)

17106

Application Number

10/713,970

Applicant(s)

Roland Contreras, et al.

Filing Date

November 14, 2003

Group Art Unit

1656

**FOREIGN PATENT DOCUMENTS**

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	1.	WO 03/56914 A1	7/17/2003					
	10.	WO 04/074499 A2	9/2/2004					
	11.	WO 05/100584 A2	10/27/2005					

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

	2.	Routier F. H. et al., "The glycosylation pattern of a humanized IgG1 antibody (D1.3) expressed in CHO cells", <i>Glycoconjugate Journal</i> 14: 201-207 (1997)
	3.	Kornfeld R. et al., "Assembly Of Asparagine-Linked Oligosaccharides", <i>Ann. Rev. Biochem.</i> 54: 631-664 (1985)
	4.	Malissard M. et al., "Expression of Functional Soluble Forms of Human $\beta$ -1,4-Galactosyltransferase 1, $\alpha$ -2,6-Sialyltransferase, and $\alpha$ -1,3-Fucosyltransferase VI in the Methylophilic Yeast <i>Pichia pastoris</i> ", <i>Biochemical and Biophysical Research Communications</i> 267: 169-173 (2000)
	5.	Bencurova M. et al., "Expression of eukaryotic glycosyltransferases in the yeast <i>Pichia pastoris</i> ", <i>Biochimie</i> 85: 413-422 (2003)
	6.	Schwientek T. et al., "Golgi Localization and in Vivo Activity of a Mammalian Glycosyltransferase (Human $\beta$ 1, 4-Galactosyltransferase) in Yeast", <i>The Journal of Biological Chemistry</i> 271(7): 3398-3405 (1996)
	7.	Vervecken W. et al., "In Vivo Synthesis of Mammalian-Like, Hybrid-Type N-Glycans in <i>Pichia pastoris</i> ", <i>Applied and Environmental Microbiology</i> 70(5): 2639-2646 (2004)
	8.	Bobrowicz P. et al., "Engineering of an artificial glycosylation pathway blocked in core oligosaccharide assembly in the yeast <i>Pichia pastoris</i> : production of complex humanized glycoproteins with terminal galactose", <i>Glycobiology</i> 14(9): 757-766 (2004)
	9.	Czlapinski J. L. et al., "Synthetic glycobiology: exploits in the Golgi compartment", <i>Current Opinion in Chemical Biology</i> 10: 645-651 (2006)

EXAMINER

DATE CONSIDERED

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.